UNIVERSIDADE DE BRASILIA

André Araujo Pires Ferreira

SOME NOTES ON GENERAL PHONETICS AND PHONOLOGY OF ENGLISH AND BRAZILIAN PORTUGUESE

Analysing Brazilian Teachers from Brasilia

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ANDRÉ ARAUJO PIRES FERREIRA

Some Notes on General Phonetics and Phonology of English and Brazilian Portuguese

- Analysing Brazilian Teachers from Brasilia –

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BANCA EXAMINADORA

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Prof. William Biserra (Orientador)

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Prof. Gilberto Antunes Chauvet (Orientador)

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Some Notes on General Phonetics and Phonology of English and Brazilian Portuguese

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INTRODUCTION

"With a gun barrel between your teeth you speak only in vowels" says Tyler Durden at the beginning of Fight Club[1], but why is that so? Why can't one speak consonants when having something inside their mouth, and in this manner preventing this person from closing and opening their mouth? According to Richards and Schmidt[2], a vowel is 'a speech sound produced without significant constriction of the air flowing through the mouth', the gun in that scenario is used to keep the air flow from being stopped and thus the person being able to only produce vowels. Consonants are the counterpart, were the definitions contrasted, and is considered to be the utterance of sounds of speech which suffers some kind of disturbance - whether short or long. Gammont, says Câmara, claims that "a consonant corresponds to a movement of open-close, with a maximum articulatory[3]" [CAMARA, 1977, 51] in other words consonants are utterances which suffer any kind of obstruction of the air flow. Without being able to use neither teeth, lips nor tongue the person remains unable to produce most consonantal sounds.

[1] Fight Club. Fox Films. 1999.

[2] Longman Dictionary of Language Teaching and Applied Linguistics. 2010.

[3] Translated from "A consoante corresponde a um movimento de cerramento-abrimento, com um máximo articulatório"

There is a third possibility of sound which collects characteristics from both consonants and vowels, these are called semivowels or glides - they usually share the same definition of a vowel, but work as the limits of the syllables instead of the nucleus (the expected for a vowel).

Phonetics and Phonology: Definition

One of the most important groups of study for the understanding of Phonetics and Phonology was the Linguistic Circle of Prague. In 1926, a group of Czech and expatriate Russian linguists gathered and, for the purpose of studying the poetic function of language, a discussion group was founded. Three of the most known names in this group were Roman Jakobson, Nicolai Troubetzkoy and Jan Mukařovský. The Oxford Reference website states that "Also known as the Prague School, the group survived World War II (though many of its members were forced into exile) but not the rise to power of the Communist Party. It was officially dissolved in 1950 but had in reality already dissipated two years earlier."

Through the study of Phonetics and Phonology these and other doubts can be solved. Before the definition given by the Prague Linguistic Circle, they were seen as "phonology used for the study of sounds and utterances of a given language, whilst Phonetics is seen as the general science of the sounds of speech"[4][CAMARA, 1977, 12]. Further, in 1999, Callou and Leitte[5] have stated the definition in a clearer manner:

> "Phonetics study the sounds as isolated physical-articulatory entities, Phonology will study the sounds from a functional point of view as elements which

[4] Translated from "fonologia usado para o estudo dos sons e da elocução de uma determinada língua, enquanto a fonética é entendida com a ciência geral dos sons da fala"

[5] CALLOU, Dinah and LEITE, Yonne. Iniciação à Fonética e à Fonologia. 1999

integrate a certain linguistic system." [CALLOU E LEITTE, 1999, 11][6]

It leads us to the contemporary understanding of what are these two faces of sound study, being Phonetics the human science responsible for studying the sounds of human speech, and Phonology the human science which studies the phonemes - known as the smallest meaningful unit of sound that can distinguish words.

The study behind phonetics can be divided into three different areas which focus on: perception, production and transmission. Articulatory is the area responsible for dealing with the way the sound is produced; "sounds are usually classified according to the position of the lips and tongue, how far open the mouth is, whether or not Vocal Cords are vibrating etc." [RICHARDS and SCHMITD, 2010, 434], it can sometimes be mistaken by Acoustic, which studies the transmission, or how the air flows through the air and the disturbances it causes from the production to the perception. Last, but not the least, Auditory, this is the area which observes the reception of the sounds and how they are perceived.

There is a whole path sound has to make in order to be heard, and to better understand how the actual production works it is necessary to know which organs are involved and what is their role on it. It is important to understand that these are parts of one's body responsible for maintaining one's life and that producing sounds is a

[6] Translated from "fonética estuda os sons como entidades físico-articulatórias isoladas, a fonologia irá estudar os sons do ponto de vista funcional como elementos que integram um sistema linguístico determinado"

secondary use of its organs, which first and most important uses are for breathing and/or eating.

Transcription

In Phonology it is expected to study the differences in the tone of an utterance, as well as the understanding of these variations. Also, it is their field of search the relationship and conditions which make phonemes combine so to form words, and from words to form utterances. On the other hand, from Phonetics it is understood a more isolated view, in other words, what they are by themselves instead of what they become when placed in a specific zone.

It is interesting to point out that when describing sounds using phonetics, the description is said to be a narrow transcription - because of the occurrence of the maximum possible of details in the given object - and presented between brackets [ ], and for phonological transcription the symbol used to start and end are the dashes / / and this is called a broad transcription for there are no details, only phonemes, an example as it follows: [p^{h}en] and /pen/.

Inside the human speech there are two minimum features that will be the base to every utterance: consonants and vowels. These are not the same for each language in the world, although their definitions should be quite similar to the one presented at the beginning of this paper.

Components of utterances

The utterances in human speech are formed by words which form utterances and so on. Sounds are defined as the smallest unit of human speech; therefore, a morpheme can be considered a word when used to express an idea. Wise (1957) on syllables states: “Each contraction, together with the resulting puff of air, constitutes the basis of a syllable. In the view of those who hold these organs, and not a characteristic of the sound of speech, though in any given language the sound will contain clues, of the most varied kind.” Also, it is important to highlight that a syllable can be expressed at least for a vowel alone (never for a consonant alone) and can build up to vowel together with a consonant cluster (gathering of two or more consonants in one syllable). A syllable can be considered open/free or closed/locked, the first meaning those ending in a vowel sound and the later a consonantal sound. A complete syllable is composed by: onset + peak + coda, the unit of peak and coda can be called a rhyme.

Onset: consonant beginning a syllable, in Portuguese the maximum is two and in English three.

Peak: the vowel in the syllable, both English and Portuguese accept at most three.

Coda: consonant ending a syllable, in English it is up to four, whilst in Portuguese only one.

Phonemes and their classification

Regarding the production of the phonemes, it is important to notice how they are divided. Consonants, for example, can be categorised according to their manner of articulation, or how the air is obstructed. A complete obstruction is categorised as **plosive**, and the following are the plosive consonants: [p] [b] [t] [d] [ʈ] [ɖ] [c] [ɟ] [k] [g] [q] [ɢ] [ʔ]. A consonant with partial occlusion is named **fricative**, such are: [ɸ] [β] [f] [v] [θ] [ð] [s] [z] [ʃ] [ʒ] [ʂ] [ʐ] [ç] [ʝ] [x] [ɣ] [χ] [ʁ] [h] [ʕ] [h] [ɦ]; Another possibility are the **nasal** consonants, these have the air stream completely blocked in the mouth and are freed through the nostrils: [m] [ɱ] [n] [ɳ] [ɲ] [ ] [N]. When the air flow is partially blocked by the tongue, it is named **lateral approximant**: [l] [ɭ] [ʎ] [L]. There are the vibrating sounds, these are produced by the movement of the tongue going up and down. They can fit in different categories, the ones named **tap** or **flap**: [ ] [ɾ] [ɽ]; or **trill**: [B] [r] [ʀ]. Lateral approximant are sounds that are produced when the air flows from the sides of the mouth for the centre is blocked by the tongue.

According to their place of articulation, or, the organs they use to be produced, the division happens in the following manner:

Bilabial: [p] [b] [m] [B͡] [ɸ] [β]

Labio-dental: [ɱ] [f] [v]

Dental: [θ] [ð]

Alveolar: [t] [d] [n] [r] [ɾ] [s] [z] [l]

Post-alveolar: [ʃ] [ʒ]

Retroflex (culled tongue): [ʈ] [ɖ] [ɳ] [ɽ] [ʂ] [ʐ] [ɭ]

Palatal: [c] [ɟ] [ɲ] [ç] [j] [j] [ʎ]

Velar: [k] [g] [x] [ɣ] [L]

Uvular: [q] [ɢ] [N] [ʀ] [χ] [ʁ]

Pharyngeal: [h] [ʕ]

Glottal: [ʔ] [h] [ɦ]

A third way of characterising consonants is whether they vibrate the vocal cords, these are named **voiceless** (no vibration) [p] [ɸ] [f] [θ] [t] [s] [ʃ] [ʈ] [ʂ] [c] [ç] [k] [x] [q] [χ] [h] [ʔ] [h] or **voiced** [b] [m] [B] [β] [ɱ] [v] [d] [n] [r] [ɾ] [z] [l] [ʒ] [ɖ] [n] [ɽ] [ʐ] [ɭ] [ɟ] [ɳ] [j] [ʎ] [g] [ɣ] [ɢ] [N] [R] [ʁ] [ʕ] [ɦ].

Vowels are divided in oral or nasal, and they can be classified by: place of articulation, position of the tongue, and whether the lips are rounded.

Regarding the place of articulation, vowels are placed as:

Back: [ɯ] [u] [ʊ] [o] [ɤ] [ʌ] [ɔ] [ɑ] [ɒ]

Central: [ɨ] [ʉ] [ə] [ɵ] [ə] [ɜ] [ɞ] [ɐ]

Front: [i] [y] [ɪ] [ʏ] [e] [ø] [ɛ] [œ] [æ] [a] [Œ]

According to the position of the tongue, they are:

Open: [æ] [a] [Œ] [ɐ] [ɑ] [ɒ]

Open-mid: [ɛ] [œ] [ə] [ɜ] [ɞ] [ʌ] [ɔ]

Centre: [ə]

Close-mid: [ɪ] [ʏ] [e] [ø] [ɵ] [o] [ɤ]

Close: [ɯ] [u] [ʊ] [ɨ] [ʉ] [i] [y]

Due to the rounding of the lips, the following is the classification:

Rounded: [u] [o] [ɔ] [ɒ] [ʉ] [ɵ] [ɞ] [y] [ʏ] [ø] [œ] [Œ]

Not rounded: [ɯ] [ɤ] [ʌ] [ɑ] [ɨ] [ə] [ɜ] [i] [ɪ] [e] [ɛ] [a]

The combination of adjacent vowels within the same syllables are called diphthongs (when 2 vowels are combined) and triphthongs (when 3 vowels are combined). When in different syllables this combination of sounds is named hiatus. The transcription of diphthongs and triphthongs can either be by using a vowel and a semivowel morpheme or two vowel morphemes. Diphthongs are classified in three types, they are:

Falling/Descending or rising/ascending: when the first sound is higher (volume or pitch) than the second the combination is named as falling/descending, otherwise it is rising/ascending.

Closing, opening or centring: this category takes the position of the mouth into consideration to classify the duos. When a diphthong is considered closing it has the second morpheme more closed than the first, on the other hand, opening diphthongs have the first morpheme more closed than the second. If a diphthong ends in a centre sound, it shall be named centring.

Narrow or wide: this classification refers to the distance between the vowels which compose the diphthong - what affects directly the movement of the tongue. Being narrow a diphthong formed by two sounds that are close in the vowel chart, in consequence, a wide diphthong receives its name due to the distance of the sounds.

Triphthongs do not have different qualifications but can be divided in how they appear in different languages according to the position of the nucleus of the syllable. In languages like English the first segment is the nucleus, whilst, in Portuguese it is the second.

Brazilian Portuguese Phonetics

Mattoso Camara states that "Portuguese words present a stronger or more intense (tonic) syllable, which can be the last, one before the last, or two before the last. This variety of positioning in the words already shows that the diacritic of strength or intensity (tonic) has phonemic value, and that these words will be classified as *oxítonas*, *paroxítonas*, e *proparoxítonas.*[7] "[CAMARA,1977, 45].

In Portuguese there are 19 consonants. According to the categories before explained, the Portuguese Consonants are fit as:

Manner of articulation:

Plosives: [p] [b] [t] [d] [k] [g].

Fricatives: [f] [s] [ʃ] [v] [z] [ʒ] [x] [h] [ɣ] [ɦ].

Nasals: [m] [n] [ɲ].

Laterals: [l] [ʎ] [ɬ].

Tap/flap/trill:[ɾ] [ɽ] [r] [ʀ]

Place of articulation:

Bilabial: [p] [b] [m] [B͡] [ɸ] [β]

Labio-dental: [ɱ] [f] [v]

[7] Translated from "É sabido que as palavras portuguesas apresentam uma sílaba mais forte ou intensa (tônica), que pode ser a última, a puníltima ou a antepenúltima.

Essa variedade de posição no vocábulo já mostra que o acento de força ou intensidade (tônica) tem valo fonêmico, e que os vocábulos se caracterizam como oxítonos, paroxítonos, e proparóxitonos."

Dental: [θ] [ð]

Alveolar: [t] [d] [n] [r] [ɾ] [s] [z] [l]

Post-alveolar: [ʃ] [ʒ]

Retroflex: [ʈ] [ɖ] [ɳ] [ɽ] [ʂ] [ʐ] [ɭ]

Palatal: [c] [ɟ] [ɲ] [ç] [j] [j] [ʎ]

Velar: [k] [g] [x] [ɣ] [L]

Uvular: [q] [ɢ] [N] [ʀ] [χ] [ʁ]

Pharyngeal: [h] [ʕ]

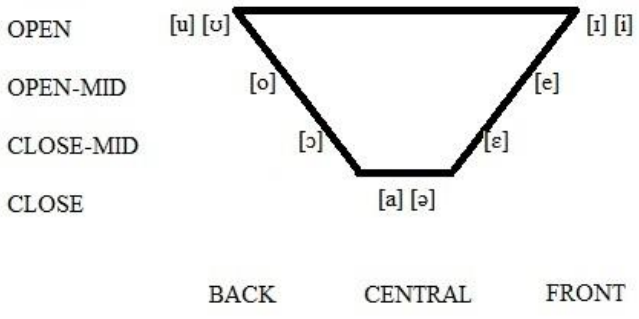
Glottal: [ʔ] [h] [ɦ]

Cords vibration:

Voiceless: [p] [t] [k] [f] [s] [ʃ] [x] [h] [ʧ]

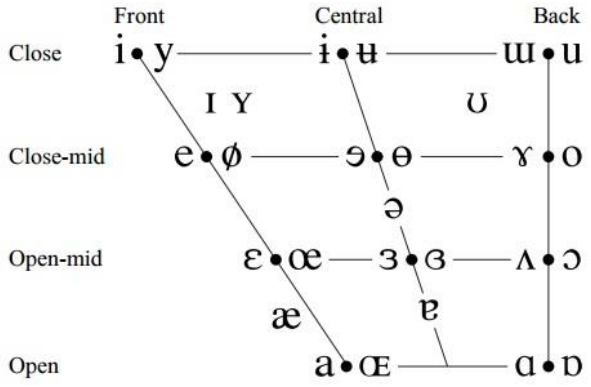
Voiced: [b] [d] [g] [v] [z] [ʒ] [ɣ] [ɦ] [ʤ] [m] [n] [ɲ] [l] [ʎ] [ɬ] [r] [ɾ] [ɽ] [ʀ].

The vowels in Portuguese can be set in a triangular form created by Troubetzkoy.



(Troubetzkoy's triangle)

A more complete grid with all the vowels sounds is the quadrangle in the IPA (International Phonetics Alphabet).



(IPA's quadrangle)

Regarding the place of articulation, the Portuguese vowels are displayed as:

Back: [ɪ] [i] [e] [ɛ] + [i] [e]

Central: [a] [ə] + [ã]

Front: [u] [ʊ] [o] [ɔ] + [u] [õ]

According to the position of the tongue, they are:

Open: [u] [ʊ] [i] [ɪ] +[u] [i]

Open-mid: [o] [e] + [o] [e]

Close-mid: [ɔ] [ɛ]

Close: [a] [ɐ] [ə] + [a]

Due to the rounding of the lips, the following is the classification:

Round: [u] [ʊ] [o] [ɔ] + [ɯ] [ɵ]

Not round: [ɪ] [i] [e] [ɛ] [a] [ɐ] [ə] + [ɪ] [e] [a]

Diphthongs in Portuguese are:

[aɪ] [eɪ] [ɛɪ] [oɪ] [ɔɪ] [uɪ] [aʊ] [eʊ] [ɛʊ] [oʊ] [iʊ] [ɪə/ɪa] [ɪi/ɪe/ɪ] [ɪu/ɪo] [ʊə/ʊa] [ʊɪ/ʊe] [ʊo/ʊu/ʊ] [aɪ] [eɪ] [oɪ] [uɪ] [aʊ]

Triphthongs: [uai] [uei/uɐi] [uau] [uei]/[uɐi] [iei/iɐi] [iou]

English Phonetics

Referring to the classification earlier discussed, the following are the English consonants:

Manner of articulation:

Plosive: [p] [b] [t] [d] [k] [g]

Fricative: [f] [v] [θ] [ð] [s] [z] [ʃ] [ʒ] [h]

Nasal: [m] [n]

Lateral approximant: [l]

Trill: [r]

Place of articulation:

Bilabial: [p] [b] [m]

Labio-dental: [f] [v]

Dental: [θ] [ð]

Alveolar: [t] [d] [n] [r] [s] [z] [l]

Post-alveolar: [ʃ] [ʒ] [ʧ] [ʤ]

Velar: [k] [g]

Glottal: [h]

Cords vibration:

Voiceless: [p] [t] [k] [f] [θ] [s] [ʃ] [h] [ʧ]

Voiced: [b] [d] [g] [v] [ð] [z] [ʒ] [ʤ] [m] [n] [ ] [l] [r]

Regarding the place of articulation, the Portuguese vowels are placed as:

Back: [u] [ʊ] [ʌ] [ɔ] [ɑ] [ɒ]

Central: [ə] [ɛ]

Front: [i] [ɪ] [e] [æ]

According to the position of the tongue, they are:

Open: [æ] [ɑ] [ɒ]

Open-mid: [ə] [ɛ] [ʌ] [ɔ]

Close-mid: [ɪ] [e] [ʊ]

Close: [i] [u]

Due to the rounding of the lips, the following is the classification:

Round: [u] [ɔ] [ɒ]

Not round: [i] [ɪ] [e] [æ] [ə] [ɛ] [ʌ] [ʊ] [ɑ]

Diphthongs in English are:

[əʊ] [aʊ] [aɪ] [eɪ] [ɔɪ] [ʊu] [ɪi] [ɪə] [ɛə] [ʊə]

Triphtongs:

[aʊə] [aɪə] [ɔɪə] [əʊə]

ANALYSIS'S INTRODUCTION

The following part contains the analysis of ten chosen words which have been pronounced differently or that contain important aspects referring to the subjects recorded. Each analysis is named after the word itself.

DISCLAIMER

The following paragraphs contain the analysis of the chosen words for this work. Whenever referring to the Stereotypical British English, the term will appear as BBC, or BBC English. 11 people have participated fully in this project, and as signed in a contract of use of personal data, their names have been changed for a number of subject (from 1 to 11).

The subjects have each pronounced the chosen words as:

Subject 1) the = /ðə/ - /ðiː/; despite = /dɪspaɪt/; genome = /dʒenɔʊm/; exceptionally = /eksepʃənali/; unusual = /ənɪʊʒʊal/; foetus = /fɪɾəs/; estimated = /estɪmeɪɾed/; suggested = /sʊdʒested/; of = /ɔv/; several = /sevɛɾol/

Subject 2) the = /ðə/ - /ðiː/; despite = /dɪspaɪtɪ/; genome = /dʒenɔʊm/; exceptionally = /esepʃənali/; unusual = /ənɪʊʒʊal/; foetus = /fɪtʊs/; estimated = /ɪstɪmeɪɾed/; suggested = /sʊdʒested/; of = /ɔv/; several = /sevɛɾol/

Subject 3) the = /ðə/ - /ðɪ/; despite = /dɪspaɪ/; genome = /dʒɪnɔʊm/; exceptionally = /eksepʃonali/; unusual = /ənɪʊʒʊol/; foetus = /fɪtəs/; estimated = /estɪmeɪɾed/; suggested = /sʊdʒested/; of = /ɔv/; several = /sevɛɾol/

Subject 4) the = /ðə/ - /ðə/; despite = /dɪspaɪt/; genome = /dʒenom/; exceptionally = /eksepʃiənali/; unusual = /ɪʊnɪʊʒʊal/; foetus = /fɪɾəs/; estimated = /estɪmeɪted/; suggested = /sʊdʒested/; of = /ɔv/ - /ɔf/; several = /sevɛɾol/

Subject 5) the = /ðə/ - /ðə/; despite = /dɪspaɪte/; genome = /dʒenoʊm/; exceptionally = /eksepʃionali/; unusual = /ənɪʊʒʊol/; foetus = /fɪtʃəs/; estimated = /ɪstɪmeɪted/; suggested = /sʊdʒested/; of = /ɔv/ - /ɔf/; several = /seveɾol/

Subject 6) the = /ðə/ - /ðɪ/; despite = /dɪspaɪt/; genome = /dʒɪnom/; exceptionally = /eksepʃinali/; unusual = /ənɪʊʒʊol/; foetus = /fɪtəs/; estimated = /estɪmeɪted/; suggested = /sʊdʒested/; of = /ɔv/; several = /seveɾol/

Subject 7) the = /ðə/ - /ðə/; despite = /dispaɪt/; genome = /gnɔʊm/; exceptionally = /eksepʃionali/; unusual = /ənɪʊʒʊal/; foetus = /fɪtəs/; estimated = /ɪsti:meɪted/; suggested = /sʊdʒested/; of = /ɔv/; several = /sɪvɪɾol/

Subject 8) the = /ðə/ - /ðə/; despite = /dɪspaɪt/; genome = /ʒenom/; exceptionally = /eksepʃənali/; unusual = /ənɪʊʒʊal/; foetus = /fɪɾəs/; estimated = /estɪmeɪɾed/; suggested = /sʊdʒested/; of = /ɔv/; several = /seveɾol/

Subject 9) the = /ðə/ - /ðɪ/; despite = /dɪspaɪt/; genome = /dʒenɔʊm/; exceptionally = /septionali/; unusual = /ənɪʊʒʊal/; foetus = /fɪtəs/; estimated = /ɪstɪmeɪted/; suggested = /sʊdʒest/; of = /ɔv/; several = /seveɾal/

Subject 10) the = /ðə/ - /ðe/; despite = /dɪspaɪt/; genome = /dʒenɔʊm/; exceptionally = /eksepʃənali/; unusual = /əniʊʒʊal/; foetus = /fɪtəs/; estimated = /estɪmeɪɾed/; suggested = /sədʒested/; of = /ɔv/; several = /seveɾɔl/

Subject 11) the = /ðə/ - /ðə/; despite = /dɪspaɪt/; genome = /dʒenɔʊm/; exceptionally = /eksepʃənali/; unusual = /ənɪʊʒʊal/; foetus = /fɪtəs/; estimated = /estɪmeɪɾed/; suggested = /sədʒested/; of = /ɔv/; several = /seveɾal/

The text used by the subjects is:

"Despite being the size of a foetus, initial tests had suggested the bones were of a child aged six to eight. These highly unusual features prompted wild speculation about its origin. Now, DNA testing indicates that the estimated age of the bones and other anomalies may have been a result of the genetic mutations. Details of the work have been published in the journal Genome Research. In addition to its exceptionally small height, the skeleton had several unusual physical features, such as fewer than expected ribs and a cone-shaped head."

BBC NEWS. *Origin of 'six-inch mummy' confirmed* by Paul Rincon.

www.bbc.com/news/amp/science-environment-43489246

ANALYSIS

THE

It is known that the definite article “the” has two possible pronunciations depending on the context it is inserted, these are used on both variations – BBC and CNN. The possibilities are – /ðiː/ /ðə/ – being the first applied to situations when the article comes before words beginning with vowel sounds and the later for consonantal sounds. Analysing the recorded subjects, it was perceived that the pronunciation in all of them was correct for consonantal contexts, but for vowel contexts there had been three different occurrences, /ðiː/(subjects 1 and 2),/ðə/(subjects 4, 5, 7, 8, 10 and 11) and /ðɪ/(subjects 3, 6 and 9). A probable cause for this differentiation is that visually wise the sound of ‘e’ is too connected to its pronunciation in Portuguese what may lead speakers to pronounce it as /ə/ in every occasion, because the sound /iː/ is too far from the standard pronunciation in Portuguese (/e/).

DESPITE

Comparing the chosen source and the production of the subjects there had been a few minor differences on the pronunciation of the word ‘despite’. It was pronounced as /dɪspaɪt/ (subjects 1, 4, 6, 8, 9, 10 and 11), /dispaɪt/ (subject 7), /dɪspaɪte/ (subject 5), /dɪspaɪtɪ/ (subject 2), and /dɪspaɪ/ (subject 3). Being the production of 2, 3, 5 and 7, the ones contrasted to the expected. The mistake seen in the pronunciation of the final /t/ can be a mirror from the usual addition of a vocalic sound, customarily /i/, that is very common in most of Brazilian Portuguese varieties whenever there is an isolated consonantal sound.

GENOME

If checked on the Cambridge Free English Dictionary Online the word ‘genome’ will have two distinct pronunciations /dʒiːnoʊm/ and /dʒiːnəʊm/, differentiate by the occurrence of the schwa /ə/ or vowel sound /o/ depending on the context chosen (CNN or BBC). The subjects produced: /dʒenɔʊm/(1, 10 and 11); /dʒiːnoʊm/(2, 5); /dʒɪnoʊm/(3); /dʒenom/(4); /dʒɪnom/(6); /gnɔʊm/(7); /ʒenom/(8); /dʒɪnɔʊm/(9). It is interesting to highlight that the subjects have all pronounced slightly different than the source referred as the standard, but that subjects 1, 10 and 11, have gotten the closest of them all, by only mispronouncing the first vowel sound.

EXCEPTIONALLY

For this is a cognate between Portuguese and English, the analysis of this production was set as one of the most necessary in the preparation of this work. This is so, because of the difference in pronunciation of the initial ‘e’ from the mother tongue and the target language. In Portuguese, this sound would usually be something close to /e/, whilst in English, it appears as /ɪ/. In the dictionary chosen to collect the pronunciation of the words it was find as /ɪkseoʃənəli/ on both CNN and BBC standards. The production of the subjects was: eksepʃənali (subject 1, 10 and 11); esepʃonali (subject 2); eksepʃonali (subject 3, 9); eksepʃiənali (subject 4); eksepʃionali (subject 5, 7); eksepʃinali (subject 6); septionali (subject 8);

UNUSUAL

The dictionary puts its pronunciation as /ʌnˈjuːʒu.əl/, but it can be seen in most of the subjects, except for numbers 3, 5, and 6, that the schwa at the end was approximated to a stronger /a/ in a way of getting closer to the Portuguese pronunciation, thus, not causing odd understanding of the word pronounced.

FOETUS

The important part of this pronunciation analysis was the variety of sounds chosen for the archiphoneme ‘R’ as a representation of the letter ‘t’ in a vocalic context. Whilst it is set as a /t/ or /ʧ/ in the source, a few subjects pronounced it as /ɾ/ or /ʃ/. This is probably an influence of the pronunciation of the letter /t/ when between at the end of a word followed by the semi-consonant ‘y’ in the CNN pronunciation found in films and series, which are examples of the most common means for Brazilians to have closer contact with native English pronunciation.

ESTIMATED

Very similar to what happened to the pronunciation of ‘foetus’, the focus for this analysis was the translation of the ‘t’ sound into shades of the archiphoneme ‘R, but differently from the later, the occurrence was only of the phoneme /ɾ/ (subjects 1, 2, 3). It is interesting to add that the ending sound /ɪ/ was exchanged for /e/ in all subjects.

SUGGESTED

The two situations to be seen in this word were the vowel sounds present. Although only the subjects 10 and 11 kept the sound of the first schwa in /səˈdʒestɪd/, the phoneme ‘e’ was used by all subjects. It is also important to say that the /ɪd/ indicating the past form of the verb was pronounced as /ed/ by 10 out of the 11 subjects, being subject 8 the one not to do it. Subject 8 pronounced it as /səˈdʒest/ not conjugating the verb accordingly. Both situations can be related to the visual aspect of words that are relatable to their forms in Portuguese, which makes it more difficult to the speaker do disassociate from the native language counterpart.

OF

One of the classic corrections performed by English As a Second Language Teachers is the pronunciation of the preposition ‘of’ - mainly students will pronunciation both ‘off’ and ‘of’ as the same sound - /ɒf/. Apart from this very common mistake in the classroom zone, the preposition is supposed to be pronounced as a weak /əv/ or a strong /ɒv/ in the BBC variety, and a weak /əv/ or a strong /ɑːv/ in the CNN variety. The subjects have all pronounced it accordingly in most times, but when before the article ‘the’, subjects 4, 5 and 8 have pronounced it as /ɒf/. Given their production in the recording I am led to believe that this was more of an attention mistake than an error *per se*.

SEVERAL

The determiner ‘several’ was the one with the most variation in pronunciation divergences amongst the subjects. The dictionary shows it to be said as /sevərəl/, and the recordings have shown the following: /severɾol/ (subjects 1, 4, 5, 6, 8); /sɪvɪɾal/ (subject 2); /sevəɾol/ (subject 3); /sɪvɪɾol/ (subject 7); /severɐl/ (subjects 9, 11) /severɔl/ (subject 10). For the disparity the results have shown, it has been impossible to show any accurate analysis with such small *corpora*.

CONCLUSION

Throughout this work five divergences could be perceived between the expected utterances and their actual performance, they are: the pronunciation of the schwa; the pronunciation of /ɾ/instead of /t/; the difficulty of disassociating cognates' different stressed syllables; the non-differentiation of the pronunciation of the definite article 'the' in a variety of contexts; and the difficulty in pronouncing voiceless consonants.

Regarding the production of 'the', it was expected that subjects could use /ðiː/ when before a vowel sound and /ðə/ before consonantal sound. The production of only 2 out of the 11 subjects have followed the expected, one of the plausible reasons is the visual reference brought from Portuguese – their mother tongue – which makes it more difficult for the speaker to keep their natural speaking flow and hold to the correct pronunciation. As referred in the previous lines, the same happens with words that have cognates in the subjects' mother tongue. For this production, subjects have to disassociate what they are reading for their own language's reference and then utter the word accordingly. What ends up happening is an interlanguage mixing both L1 and L2.

Usually, for Brazilian Portuguese speakers producing in Brazilian Portuguese, when a consonant ends a syllable and another one initiates the following, a vowel sound is added to this transition. This can be seen in the words such as: 'advogado' - /adiːvogadʊ/, and 'adjunto' - /adiːʒʊnto/. When they speak English, this "add-on vowel" remains in a few words, 'despite' and --- as shown in this study, but also in other cases like 'bad' - /bædi/ or 'food' - /fʊdi/.

The mispronunciation of the word 'of' happened in the specific context of the particle preceding the word 'the', which led the study to accept it as lack of attention

over a fossilized mistake. Finally, it is interesting to summarize the situation happened with the uttering of '*foetus*' and 'estimated'. The production of intervocalic 't' for most of the subjects analyzed have suffered influence of the CNN Standard of English and changed from /t/ to /ɾ/.

APPENDIX

TABLE 1

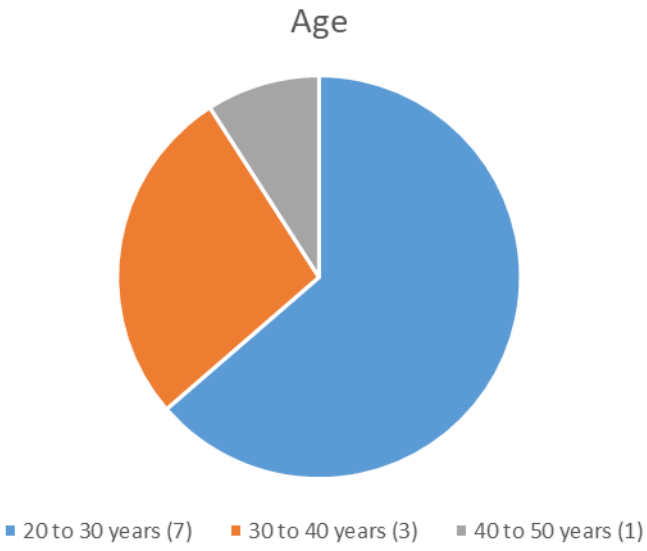


TABLE 2

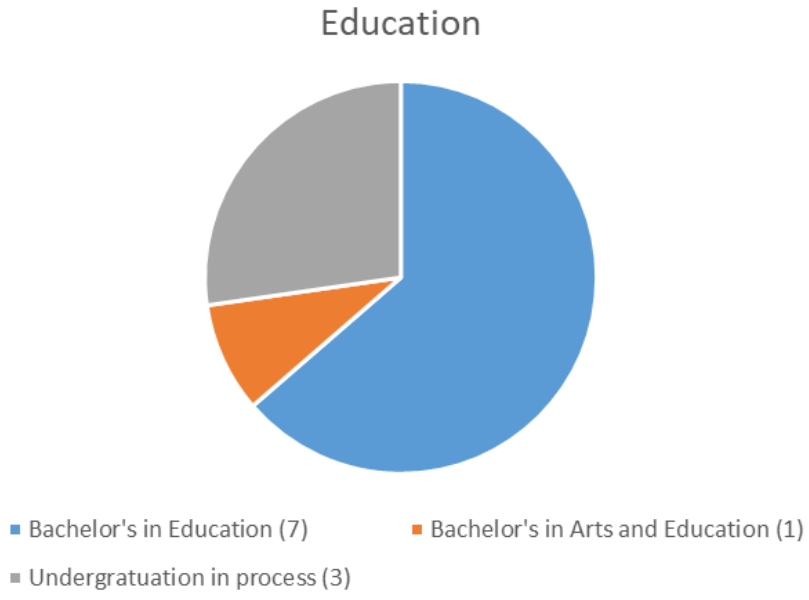


TABLE 3

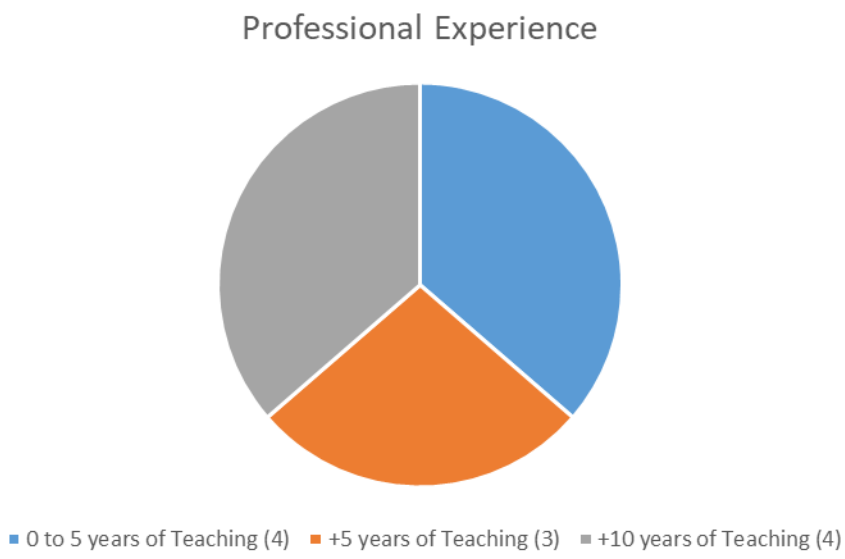


TABLE 4

SUBJECT 01

"Despite being the size of a fetus, initial tests had suggested the bones were
dɪspaɪt biːŋ ðə saɪz ɔvə θɪɾəs ɪnɪʃəl tests hæd sʊdʒested ðə boʊnsʊəɾ
of a child aged six to eight. These highly unusual features prompted wild
ɔvə tʃaɪɾd eɪdʒɾd sɪks ðə eɪt// ðɪs haɪli ənɪʊʒʊəʔ θɪtʊrs prɔpted ʊaɪld
speculation about its origin. Now, DNA testing indicates that the estimated age
ɪspɛkɪʊleɪʃən ɑbaʊɾɪts ɔɪɾɪdʒɪn// naʊ dɪeneɪ testɪŋ indikeɪts ðˀeːt ðɪ estɪmeɪɾed
of the bones and other anomalies may have been a result of the genetic
eɪdʒ ɔvðə boʊns ən ɔðɛr ənɔmalis meɪhæevbɪnəɾɪsoʊlt ɔv ðə ʒənɛɾɪk
mutations. Details of the work have been published in the journal Genome
mɪɾteɪʃəns// dɪteɪɾs ɔvðə vɔrk hæev bɪn pəblɪʃed in ðə dʒɔrnal dʒenoʊm
Research. In addition to its exceptionally small height, the skeleton had several
ɾɪsɚʃ// in ədɪʃən tˀʊ its ɛksɛpʃənali smɔlheɪt ðə skɛletən hæed sɛveɾol
unusual physical features, such as fewer than expected ribs and a cone-shaped
ənɪʊʒʊal θɪzɪkal fɪtʊrs sətʃ ɛs fjʊer ðən ɛkspɛkted ɪɪbs en a kɔʊnʃeɪpd
head."
hæd.

SUBJECT 02

"Despite being the size of a fetus, initial tests had suggested the bones were
dɪspaɪt bɪŋ ðəsaɪz ɔvafɪtʊs ɪnɪʃəl test hæd sʊdʒestɪd ðə boʊnesʊər
of a child aged six to eight. These highly unusual features prompted wild
ɔv ə tʃaɪld eɪdʒɪd sɪk tə eɪt// ðiz haɪli ənɪʊʒʊəl fɪtʃərs prɔptɪd vaɪld
speculation about its origin. Now, DNA testing indicates that the estimated age
ɪspɛkɪʊleɪʃənabaʊtɪtsɔrɪʒɪn//naʊ diɛneɪ testɪŋ ɪndikeɪts ðæt ðə ɪstɪ meɪʃə
of the bones and other anomalies may have been a result of the genetic
ɛɪdʒɔvðə boʊns ɛn ʌðər nɔmalis meɪ hæv bi:n ərɪsʊltɔvðə dʒənɛtɪk
mutations. Details of the work have been published in the journal Genome
mɪvteɪʃənz// dɪteɪls ɔv ðə vɔrk he bi:n pʌblɪʃd i:n ðə dʒɜrnal dʒenoʊm
Research. In addition to its exceptionally small height, the skeleton had several
rɪsərʃ// ɪn ədɪʃən tʊ ɪts ɛksɛpʃənəlɪ smɔl haɪt ðəɪskɛlɛtən hæd sɪvɪrəl
unusual physical features, such as fewer than expected ribs and a cone-shaped
ənɪʊʒʊəl ðɪzɪkəl fɪtʃʊrs sʌtʃ ɛs fɪʊərðɛn ɛkspɛktɛdrɪbs ɛnd ə
head."
Koʊn ʃeɪpd hɛd

SUBJECT 03

"Despite being the size of a fetus, initial tests had suggested the bones were
dɪspaɪ biŋ ðə saɪz ɔv ə fitəs iniʃəl tests hædsʌdʒested ðə bons wər
of a child aged six to eight. These highly unusual features prompted wild
ɔv ə ʃaɪld eɪdʒəd sɪks tə eɪt // ðɪz haɪli ənjuʒwəl fiʧərs prompted waɪld
speculation about its origin. Now, DNA testing indicates that the estimated age
ɪspekjʊleɪʃən əbaʊt ɪts ɔrɪdʒɪn // naʊ diː eɪ testɪŋ ɪndɪkeɪtəs ðət ðɪ estɪmeɪtɪd
of the bones and other anomalies may have been a result of the genetic
eɪdʒ ɔv ðə bonz ən ʌðər ənɑməliz meɪ hæv bɪn ə rɪzʌlt ɔv ðə ʤenɛtɪk
mutations. Details of the work have been published in the journal Genome
mjuteɪʃənz // diteɪlz ɔv ðə wərk hæv bɪn pʌblɪʃt ɪn ðə ʤɜrnəl ʤinoʊm
Research. In addition to its exceptionally small height, the skeleton had several
risərʧ // ɪn ədɪʃən tʊ ɪts ɛksepʃənəli smɔl haɪt ðə skelɪtən hæd sevərəl
unusual physical features, such as fewer than expected ribs and a cone-shaped
ənjuʒwəl fɪzɪkəl fiʧərz sʌʧ əz fjuər ðən ɛkspɛktɪd ribz ənd ə koʊn
head."
ʃeɪpt hɛd

SUBJECT 04

"Despite being the size of a fetus, initial tests had suggested the bones were
dɪspaɪt bɪŋ ðə saɪz ɔv ə fiːtəs ɪnɪʃəl tests hæd sʊdʒɛstɪd ðə boʊnz wər
of a child aged six to eight. These highly unusual features prompted wild
ɔv ə ʧaɪld eɪʤd sɪks tʰu eɪt. // ðiːz haɪlɪ ʌnjuʒwəl fiːʧərz prɑmpʧd waɪld
speculation about its origin. Now, DNA testing indicates that the estimated age
ɛkspɛkjʊleɪʃən əbaʊt ɪts ɔrɪʤɪn // naʊ diːɛneɪ tɛstɪŋ ɪndɪkeɪts ðæt ðə ɛstɪmeɪtɪd eɪʤ
of the bones and other anomalies may have been a result of the genetic
ɔf ðə boʊnz ænd ʌðər ənɑməliz meɪ hæv bɪn ə rɪzʌlt ɔf ðə ʤənɛtɪk
mutations. Details of the work have been published in the journal Genome
mjuteɪʃənz // dɪteɪlz ɔf ðə wɜrk hæv bɪn pʌblɪʃt ɪn ðə ʤɜrnəl ʤinoʊm
Research. In addition to its exceptionally small height, the skeleton had several
riːsərʧ // ɪn ədɪʃənəlaɪ smɔl haɪt ðə ɛkskɛlətən hæd sɛvərəl
unusual physical features, such as fewer than expected ribs and a cone-shaped
ʌnjuʒwəl fɪzɪkəl fiːʧərz sʌʧ æz fjuər ðæn ɛkspɛktɪd ɹɪbz ænd ə
head."
kon ʃeɪpt hɛd

SUBJECT 05

"Despite being the size of a fetus, initial tests had suggested the bones were
dɪspaɪte beɪŋ ðə saɪz ɔv ə fiːtəs, ɪnɪʃəl tests hæd sʊdʒested ðə boʊnes wɜr
of a child aged six to eight. These highly unusual features prompted wild
ɔf ə tʃaɪld eɪʤd sɪks tʊ eɪt // ðiːz haɪli ənjuʒʊəl fiːʧəz prɪpɑt waɪld
speculation about its origin. Now, DNA testing indicates that the estimated age
spekjʊleɪʃən əbaʊt ɪts ɔrɪʤɪn // naʊ diː en eɪ testɪŋ indɪkeɪts ðæt ðə ɪstɪ meɪtɪd
of the bones and other anomalies may have been a result of the genetic
ɛvɪdəns ɔv ðə boʊnz ænd ʌðər ənɑməliz meɪ hæv bɪn ə rɪzʌlt ɔv ðə ʤənɛtɪk
mutations. Details of the work have been published in the journal Genome
mjʊteɪʃənz // diːteɪlz ɔv ðə wɜrk hæv bɪn pʌblɪʃt ɪn ðə ʤɜrnəl ʤiːnoʊm
Research. In addition to its exceptionally small height, the skeleton had several
rɪsɜrʧ // ɪn ədɪʃən tʊ ɪts ɪksɛpʃənəli smɔl haɪts ðə skelətən hæd
unusual physical features, such as fewer than expected ribs and a cone-shaped
sɛvərəl ənjuʒʊəl fɪzɪkəl fiːʧərz sʌʧ æz fjuːər ðæn ɛkspɛktɪd rɪbz
head."
ænd ə koʊn ʃeɪpt hɛd

SUBJECT 06

"Despite being the size of a fetus, initial tests had suggested the bones were
dɪspaɪt bɪŋ ðə saɪz ɔv ə fiːtəs ɪnɪʃəl tɛsts hæd sʌdʒɛstɛd ðə boʊnz wər
of a child aged six to eight. These highly unusual features prompted wild
ɔv ə tʃaɪld eɪdʒd sɪks tə eɪt// ðiːz haɪlɪ ənjuːʒəl fiːtʃərz prɑmptɛd waɪld
speculation about its origin. Now, DNA testing indicates that the estimated age
ɪspɛkjəleɪʃən əbaʊt ɪts ɔrɪdʒɪn// naʊ diː eɪ tɛstɪŋ ɪndɪkeɪts ðæt ðɪ ɛstɪmeɪtɛd
of the bones and other anomalies may have been a result of the genetic
eɪdʒ ɔv ðə boʊnz ɛn ə ðər ənɑməliz meɪ hæv bɪn ə rɪzʌlt ɔv ðə dʒənɛtɪk
mutations. Details of the work have been published in the journal Genome
mjuːteɪʃənz// diːteɪlz ɔv ðə wɜrk hæv bɪn pəblɪʃt ɪn ðə dʒɜrnəl dʒiːnəm
Research. In addition to its exceptionally small height, the skeleton had several
rɪsɜrtʃ// ɪn ədɪʃən tə ɪts ɛksɛpʃənəlɪ smɔl haɪt ðɪ skɛlɪtən hæd sɛvərəl
unusual physical features, such as fewer than expected ribs and a cone-shaped
ənjuːʒuəl fɪzɪkəl fiːtʃərz sʌtʃ əz fjuːər ðən ɛkspɛktəd rɪbz ən ə
head."
kon ʃeɪpt hɛd

SUBJECT 07

"Despite being the size of a fetus, initial tests had suggested the bones were of a child aged six to

dɪs'paɪt bɪŋ ðə 'saɪzɪ ɔv ə 'fiːtəs ɪ'nɪʃəl 'tɛsts hæd sə'dʒɛstɪd ðə boʊnz wɜr ɒv ə ʧaɪld eɪdʒd sɪks

eight. These highly unusual features prompted wild speculation about its origin. Now, DNA testing

eɪt. ðiːz haɪli ən'juʒuəl 'fiːʧəz prɒmptɪd waɪld ˌspɛkjə'leɪʃən ə'baʊt ɪts 'ɔrɪdʒɪn. naʊ, diː eɪ eɪ

indicates that the estimated age of the bones and other anomalies may have been a result of the

'tɛstɪŋ ɪndɪkeɪts ðət ðiː ɪ'stɪmeɪtɪd eɪdʒ ɒv ðə boʊnz ænd ʌðər ə'nɒmə'liːz meɪ hæv bɪn ə rɪ'zʌlt ɒv ðə

genetic mutations. Details of the work have been published in the journal Genome Research. In

ʤə'nɛtɪk mjuː'teɪʃənz. 'diːteɪlz ɒv ðə wɜrk hæv bɪn 'pʌblɪʃt ɪn ðə ʤɜrnəl ʤiːnoʊm rɪ'sɜrʧ. ɪn

addition to its exceptionally small height, the skeleton had several unusual physical features, such

ə'dɪʃən tə ɪts ɪk'sɛpʃənəli smɔl haɪt, ðə 'skɛlətən hæd 'sɛvərəl ʌn'juʒuəl 'fɪzɪkəl 'fiːʧərz, sʌʧ ɛz

as fewer than expected ribs and a cone-shaped head."

'fjuər ðæn ɪk'spɛktɪd rɪbz ænd ə koʊn ʃeɪpt hɛd

SUBJECT 08

"Despite being the size of a fetus, initial tests had suggested the bones were of a child aged six to

dɪspaɪt biːŋ ðə saɪz ɔvə fiːtəs ɪnɪʃəl tɛsts hæd sʌdʒɛstɪd ðə boʊnz wər ɒv ə tʃaɪld eɪdʒd sɪks tə

eight. These highly unusual features prompted wild speculation about its origin. Now, DNA testing

eɪt ðiːz haɪli ənjuːʒuəl fiːtʃərz prɒmptɪd waɪld spɛkjʊleɪʃən əbaʊt ɪts ɒrɪdʒɪn naʊ diːɛneɪ tɛstɪŋ

indicates that the estimated age of the bones and other anomalies may have been a result of the

ɪndɪkeɪts ðət ðə ɛstɪmeɪtɪd eɪdʒ ɒv ðə boʊnz ænd ʌðər ənɒməlɪz meɪ hæv biːn rɪzʌlt ɒv ðə

genetic mutations. Details of the work have been published in the journal Genome Research. In

dʒənɛtɪk mjuːteɪʃənz diːteɪlz ɒv ðə wɜːk hæv bɪn pʌblɪʃt ɪn ðə dʒɜːnəl dʒiːnəm rɪsɜːtʃ ɪn

addition to its exceptionally small height, the skeleton had several unusual physical features, such

ədɪʃən tə ɪts sɛpʃənəli smɔːl haɪt ðə skɛlɪtən hæd sɛvərəl ʌnjuːʒuəl fɪzɪkəl

as fewer than expected ribs and a cone-shaped head."

əz fjuːər ðən ɛkspɛktɪd rɪbz ænd ə koʊn ʃeɪpt hɛd

SUBJECT 09

"Despite being the size of a fetus, initial tests had suggested the bones were of a child aged six to

dɪspaɪt bɪŋ ðə saɪz ɔvə θɪrɹsɪnɪʃəl tɛsts hæd sʌdʒɛsted ðə bɔrnes wərə tʃaɪld eɪdʒed sɪks

eight. These highly unusual features prompted wild speculation about its origin. Now, DNA testing

eɪt ‖ ðis haɪ(ɪ əhɪʌsuəl θitʃərs prɔpd waɪld ɪspɛkʌleɪʃənəbaʌɪtsɔrɪʒɪn ‖ naʌ dɪeneɪ tɛstɪŋ

indicates that the estimated age of the bones and other anomalies may have been a result of the

ɪndɪkeɪts ðɛt ðɪ estɪmeɪted eɪʒ ɔv ðə bɔʊns end ɔðər anomalɪs meɪ hæv bɪn ə rɪzʌlt ɔv ðə

genetic mutations. Details of the work have been published in the journal Genome Research. In

dʒenɛtɪk mɪʌteɪʃəns ‖ dɪteɪls ɔv ðə wɔrk hæv bɪn pəblɪʃed ɪn ðə dʒɔrnəl dʒɪnɔʌm rɪsərʃ ‖ ɪn

addition to its exceptionally small height, the skeleton had several unusual physical features, such

ədɪʃən ðə ɪts ɛksɛpʃənəlɪ ɪsmɔl haɪt ðə ɪskeletən hæd sɛvərəl ənʌʒʊəl θɪzɪkəl θitʃʊrs

as fewer than expected ribs and a cone-shaped head."

səʃɛs fɪʌvər ðən ɛkspɛkted rɪbs ɛnd ə kɔʌn ʃeɪpd hæd

SUBJECT 10

"Despite being the size of a fetus, initial tests had suggested the bones were
dɪspəɪt bɪŋ ðə saɪz ɒv ə θiːtəs ɪnɪʃəl tests hæd səʤestɪd ðə bəʊnz wəː
of a child aged six to eight. These highly unusual features prompted wild
ɒv ə ʧaɪld eɪʤɪd sɪks tuː eɪt || ðiːz haɪli ənjuːʒuəl fiːʧəz prɒptɪd waɪld
speculation about its origin. Now, DNA testing indicates that the estimated age
ɪspekjʊleɪʃən əbaʊt ɪts ɒrɪʤɪn || naʊ diːneɪ testɪŋ ɪndɪkeɪts ðæt ðə
of the bones and other anomalies may have been a result of the genetic
ɛstɪmeɪtɪd eɪʤ ɒv ðə bəʊnz en ʌðər ənɒməlɪz meɪ hæv biːn ə rɪsʌlt ɒv ðə
mutations. Details of the work have been published in the journal Genome
ʤɛnɛsɪs mjuːteɪʃənz || diːteɪlz ɒv ðə wɜːk hæv bɪn pʌblɪʃt ɪn ðə ʤɜːnəl ʤenəʊm
Research. In addition to its exceptionally small height, the skeleton had several
rɪsɜːʧ || ɪn ədɪʃən tuː ɪts ɛksɛpʃənəli smɔl haɪt ðə ɪskɛlɪtən hæd sevrəl
unusual physical features, such as fewer than expected ribs and a cone-shaped
ənjuːʒuəl fɪzɪkəl fiːʧəz sʌʧ æz fjuːə ðən ɛkspɛktɪd rɪbz en ə kəʊn ʃeɪpd
head."
hæd

SUBJECT 11

"Despite being the size of a fetus, initial tests had suggested the bones were
dɪspaɪt beɪŋ ðə saɪzəv ə fitəs ɪnɪʃəl tests hæd sədʒested ðə bounz wər
of a child aged six to eight. These highly unusual features prompted wild
əv ə tʃaɪld eɪdʒd sɪks tə eɪt // ðiz haɪlɪ ənjuʒuəl fitʃərz prompted waɪld
speculation about its origin. Now, DNA testing indicates that the estimated age
spekjəleɪʃən əbaut ɪts ɔrɪdʒɪn // naʊ di en eɪ testɪŋ ɪndɪkeɪts ðət ðə estɪmeɪtɪd
of the bones and other anomalies may have been a result of the genetic
eɪdʒ əv ðə bounz en ʌðər ənɔməliz meɪ hæv bɪn ə rɪsʌlt əv ðə ðə dʒənetɪk
mutations. Details of the work have been published in the journal Genome
mjuteɪʃənz // diteɪlz əv ðə wərk hæv bɪn pʌblɪʃt ɪn ðə dʒɜrnəl dʒenoum
Research. In addition to its exceptionally small height, the skeleton had several
risərʧ // ɪn ədɪʃən tu ɪts ɛksɛpʃənəli smɔl haɪt ðə ɪskɛlətən hæd sɛvərəl
unusual physical features, such as fewer than expected ribs and a cone-shaped
ənjuʒuəl fɪzɪkəl fitʃərz sʌʧ əz fjuər ðən ɛkspɛktɪd rɪbz ənd ə koun ʃeɪpt
head."
hæd

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